

Three New Nearctic Acalypterate Diptera

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Frequently, a revision of a genus of insects is hardly published before undescribed species are discovered. Three such species are described here, with notes placing them in the recently published keys. Two are in the family Milichiidae, and one in Trixoscelidae.

MILICHIIDAE

Meoneura californica, new species

Highly polished black, with yellow halter knob, lightly browned wing, and two pairs of dorsocentral bristles.

Male.—Predominantly black; anterior half of front reddish yellow, parafacial and cheek anteriorly reddish brown; knob of halter lemon-yellow, the stalk brown; veins brown, the wing membrane lightly brown tinted.

Front shining, the frontal triangle poorly distinguished, especially toward apex, not smooth and polished as in *M. polita* Sabrosky, half as long as the front and with similar minute wrinkling; ocellar tubercle obscurely gray pollinose, subshining; eye large, rounded; cheek shining but not smooth, minutely wrinkled both above and below the diagonal ridge, rather broad, height at the middle 0.44 times that of an eye; middle bristle of the three on the vibrissal angle slightly shorter than the others; chaetotaxy of head as usual in the genus, the bristles moderately strong; postvertical bristles slightly divergent; one pair of anterior interfrontal bristles fairly strong and distinct, directed forward above the lunule.

Mesonotum, scutellum, and part of pleuron (pro-, meso-, and sternopleuron) polished; notal hairs sparse, as in *polita*, but not as long and conspicuous as in that species; two pairs of dorsocentral bristles, the posterior pair long and well developed, the presutural pair only about half as long, but clearly standing out

from the mesonotal hairs, especially as seen in profile; pteropleuron without bristles.

Abdomen shining, the dorsum finely shagreened, terga with minute hairs, appearing bare except under high magnification; terminalia (Fig. 1) with both forceps and lamella well developed, the latter with numerous long bristles.

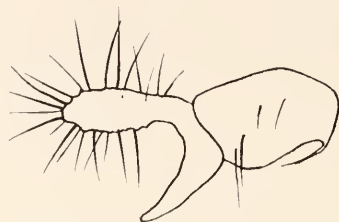


FIG. 1. Male terminalia of *Meconeuria californica*.

Legs short, the basitarsi moderately short; fore femur with a strong preapical posteroventral bristle on distal fourth, followed by short hairs.

Venation as usual for the genus; costa beyond first vein with the usual short, regular setae; costa, third, and fifth veins strong, second vein slender but distinct, the fourth pale and weak; second vein bisinuate, shorter than in *polita*, the second costal sector (between apices of veins 1 and 2) 3.7 times the length of third sector, the third subequal to or barely longer than (1.05) the fourth sector; fourth vein weakly sinuate.

Female.—As described for male, except for terminalia.

Length of body, 1.5 mm; of wing, 1.25 mm.

Holotype male, *allotype*, and one male, five female paratypes, Borrego Valley, San Diego Co., CALIF., June 20, 1960, and one female paratype, Borrego Springs, Calif., January, 1961 (Bryan T. Whitworth), taken in Tinkham trap with rotten egg bait. Type No. 65670 in the U. S. National Museum, paratypes returned to the Bureau of Vector Control, California Department of Public Health. Also two female paratypes, Coachella Valley, Calif., Dec. 18, 1929 and Dec. 9, 1930 (R. W. Burgess), previously included as paratypes of *M. polita* Sabrosky [U. S. Nat. Mus.].

The genus *Meoneura* was revised by Sabrosky (1959, Ann. Ent. Soc. Amer. 52: 17-26), with a key to 12 species. The present new species closely resembles *M. polita* Sabrosky and will key to that species, but differs as shown in the following couplet:

- Frontal triangle distinct, smooth and polished, $\frac{3}{4}$ or more the length of front; second costal sector 2.4-2.7 times the length of third sector, the latter longer than fourth (1.1-1.27 times); veins yellowish and wing membrane whitish; male terminalia simple, the lamella undeveloped (Sabrosky, 1959, Fig. 3) *M. polita* Sabr.
- Frontal triangle poorly distinguished, subshining, minutely wrinkled, half as long as front; second costal sector distinctly longer than in *polita*, 3.7 times the length of third sector, the third and fourth subequal; veins brown and wing membrane brown tinted; male terminalia with lamella well developed (Fig. 1, herewith) *M. californica*, n. sp.

Phleomyia vockerothi, new species

Large species with four pairs of dorsocentral bristles, no outer verticals, a row of 3 mesopleural bristles, and silvery dorsum of abdomen.

Male.—Black to black-brown, dull, brownish-gray pollinose except for the brilliant silvery dorsum of abdominal segments 2 through 5; wing hyaline, veins pale brown and membrane light brown tinted; calypteres brown with brown fringe.

Front slightly wider than that of *indecora* (Loew), at the vertex subequal to eye width and 0.38 times the width of head, sides slightly converging anteriorly, at the lunule the front 0.26 times the head width; postvertical bristles almost parallel, weakly divergent; outer vertical bristles absent; lunular bristles weak; face weakly concave, gray pollinose but subshining; parafacial linear; cheek very narrow, sublinear directly below eye, slightly widening anteriorly to vibrissa; proboscis short.

Mesonotum with four pairs of dorsocentral bristles, the anterior bristle in each row, close to the mesonotal suture, only half the length of the following bristle; two pairs of well-developed postsutural acrosticals, on posterior slope of mesonotum, the

presuturals especially well developed; mesopleuron with three strong bristles in a single row. Abdomen broad and flat, twice the width of thorax, abdominal terga 2 through 4 each with one row of short, fine, black hairs near posterior margin; abdominal sterna narrow, the fourth and fifth sparsely beset with hairs; sternum 4 narrow as in *expansa* Aldrich; sternum 5 subtriangular, broadened distally.

Wing venation approximately as in *indecora*; costal excision only moderately deep, intermediate between *indecora* and *expansa*, 1.7 times the length of small crossvein.

Length of body, 5 mm; of wing, 4 mm.

Holotype male, Highlands, N. C., 3,800 ft, June 24, 1957 (J. R. Vockeroth), "at light during heavy rain." Type in the Canadian National Collection, Ottawa.

Pholeomyia vockerothi is characterized by an interesting combination of characters. As may be seen in my recent revision of the genus (Sabrosky, 1959, Ann. Ent. Soc. Amer. 52: 316-331), the new species belongs with the few species (*longiseta* Becker, *latifrons* Sabrosky, *indecora* (Loew), and *expansa* Aldrich) in which there are three to four pairs of dorsocentral bristles and parallel or subparallel postverticals. Three of the four species have the thorax and abdomen concolorous in both sexes, gray to brown-gray pollinose. The striking silvery abdomen of *vockerothi* obviously resembles that of the fourth species, *P. expansa*, known only from California. However, several characters of the new species correspond to those of the common and widespread *P. indecora*, notably the presence of only three mesopleural bristles, absence of outer verticals, and brown wing. In the depth of the costal excision, *vockerothi* is intermediate between *indecora* and *expansa*, and in width of cheek it is narrower than either.

The range of *vockerothi* may be extremely limited. It was collected in the area in western North Carolina that has a localized fauna with striking relationships to the distant fauna of the far western states (e.g., the acrocerid genus *Eulonchus*), and its apparent relationship to the Californian species *expansa* suggests that it may be one of these localized species.

The new species will pass to couplet 4 in the key by Sabrosky (1959), which can be modified as follows, using first those characters that are known to apply to both sexes in this genus, although females of both *expansa* and *vockerothi* are still unknown:

4. Mesopleuron with three bristles in a single row along posterior margin; wing brown tinted; male lacking outer verticals.....4a.
 — Mesopleuron more heavily bristled, typically with seven bristles in two rows; wing whitish; male with long, strong outer verticals (Calif.).....*P. expansa* Ald.
 4a. Cheek narrow, sublinear below eye; dorsum of male abdomen silvery except for narrow first tergum (N.C.)....
*P. vockerothi*, n. sp.
 — Cheek broad for the genus, slightly less than breadth of third antennal segment; thorax and abdomen concolorous in both sexes, gray to brown-gray pollinose (widespread, U. S. and Canada).....*P. indecora* (Loew).

TRIXOSCELIDAE

Spilochroa geminata, new species

Wing with numerous hyaline spots, and abdomen polished black.

Male, female.—Color, pollinosity, and habitus as in the common *ornata* (Johnson). Dull, gray to grayish brown; front yellow, especially anteriorly, the parafrontal, face, and cheek whitish and frontal triangle gray-brown; antenna yellow above, third segment black to brown below, especially on outer surface. Thorax gray with some inconspicuous brown markings; small brown spots about the bases of bristles and hairs. Abdomen polished black except for dull, brownish basal segment, and, in the male, the large, dull, finely brown pollinose terminalia. Legs yellow, fore femur slightly infuscated on outer side. Wing, except at base, brown with numerous hyaline spots; subcostal cell hyaline with central brown spot. Hairs and bristles black.

Anatomy and chaetotaxy as in *S. ornata*, the type-species. Wing venation as figured for *ornata* (Williston, 1908, Manual N. Amer. Diptera, ed. 3, p. 297); wing with pattern of hyaline

spots similar to *ornata*, but marginal cell with three large, evenly distributed, subquadrate spots, the median larger than either of others; submarginal and first posterior cells each with two spots close together, directly behind the large median spot in marginal cell, and discal cell with two large spots beyond level of small crossvein; spotting in other areas much like that of *ornata*.

Length of body and of wing, 2.5–3 mm.

Holotype male, and *allotype*, Buckeye, Maricopa Co., ARIZ., Jan. 18, 1961 (A. N. Villa). Type No. 65671 in the U. S. National Museum. Paratypes: 2 males, 6 females, same data as holotype; 2 females, same locality, Dec. 9, 1960 and Jan. 11, 1961; male, 3 miles s. of Cave Creek Postoffice, Maricopa Co., Ariz., June 1952, at light (H. K. Gloyd); male, 2 females, Avondale, Ariz., Dec. 6, 1960; 2 males, Tucson, Ariz., June 17, 1917 (J. M. Aldrich); male, Imuris, Sonora, Mexico, Apr. 16, 1952 (R. E. Ryckman). The 1960–61 specimens were collected in Steiner fruit fly traps.

A key to the four Nearctic species of *Spilochroa* was published by Wheeler (1955, Wasmann Jour. Biol. 13: 111–112). The new species will key to *S. polita* Malloch, both having a subcostal cell with dark spot centrally, and abdomen polished black. The new species has a more thickly spotted wing, with pairs of subquadrate spots as noted, in the submarginal, first posterior, and discal cells, whereas in *polita* there is only a single, small, rounded hyaline spot at each of the points mentioned and the wing thus appears predominantly brown. No males of *polita* are available for comparisons of the male terminalia.

A geographical separation from *polita* is possible, but present material is too limited to be sure. All known specimens of *polita* were collected in New Mexico and Texas, and those of the new species in Arizona and Sonora.